

What is claimed is:

1. A laser beam receiver for receiving a scanning laser beam, comprising a filter device, and a photodetecting means provided with a plurality of photodetectors;

wherein the filter device has a lenticular part capable of expanding a scanning laser beam in a scanning direction in which the laser beam moves for scanning, and a diffusing part capable of diffusing the laser beam transmitted by the lenticular part.

2. The laser beam receiver according to claim 1, wherein the photodetecting means includes two photodetectors arranged on a line perpendicular to the scanning direction, and the two photodetectors are divided into sections.

3. The laser beam receiver according to claim 1 (or 2), wherein the filter device is formed of a material containing a fluorescent material instead of forming the diffusing part in the filter device.

4. The laser beam receiver for receiving a scanning laser, comprising an optical member, and a photodetecting means including a plurality of photodetectors;

wherein the photodetectors are arranged on a line substantially perpendicular to a scanning direction in

which the laser beam moves for scanning, the optical member is disposed in front of the photodetectors, expands the laser beam in a direction crossing the photodetectors and is capable of diffusing the expanded laser beam such that the shape of the expanded laser beam is maintained.

5. A light position determining device comprising the laser beam receiver according to any one of claims 1 to 4.